



**Contract Grower  
Environmental Best  
Management  
Practices Guide**

# ***Introduction***

## **Nutrient Management Planning**

Nutrient management is defined as identifying how the major plant nutrients (nitrogen, phosphorus, and potassium) are to be annually managed for expected crop production and for the protection of water quality. A nutrient management plan is a written site-specific plan, which addresses these issues. The goal of farm nutrient management planning is to minimize adverse environmental effects, primarily upon water quality, and to avoid unnecessary nutrient applications above the point of optimization so long-run net farm financial returns are optimized. It should be recognized that some level of nutrient loss to surface and groundwater will occur despite following the recommendations in this manual; however, these losses should be lower than would occur without nutrient management. The dual goals of nutrient management are to consider economics and water quality. These are easier to achieve for field crops in which fertilizer expenses are significant as compared to the value of the crop, than for high value crops for which fertilizer expenses are relatively insignificant.

## ***Soil Testing***

### **Soil Testing For pH, P, K**

Soil testing in conjunction with soil productivity information is critical to making sound fertilizer application decisions from both an environmental and economic standpoint. The soil, manure, sewage sludge, organic matter decomposition, and commercial fertilizers can supply crop nutrients for optimum crop growth to occur. The starting point is nutrient availability in the soil as determined by a soil test. The Extension Service and various private labs offer soil tests for pH, nitrogen, phosphorus, potassium, calcium, magnesium, and various micronutrients.

Every field should be tested after each crop rotation. All crop fields should be tested at least once every three years.

Samples should be taken with a sampling tube or auger. A trowel or spade may be used if these are available, but a good job of sampling will be more difficult. Samples should be made up of at least five sub samples or cores from each acre represented by the sample. At least 20 cores should be pulled per soil sample. Sample to the plow depth in cropland, and the top two to four inches in pasture or sod. Cores should be thoroughly mixed in a clean plastic bucket before the sample box is filled with soil. Soil conditions should not be too wet or too dry when samples are taken, so good mixing can occur in the bucket.

## ***Nutrient Management Regulations***

Regulations requiring nutrient management planning or practices by farm operators may be established at the local, state or federal level of government.

### **Local Regulations and Ordinances**

Local regulations pertaining to nutrient management may be developed for all or certain categories of farm operations. Regulations and ordinances addressing the same issue can vary a great deal among localities. It is best to contact the local government directly with respect to their nutrient management regulations.

#### **Local Zoning Ordinances**

Many counties across the United States have ordinances requiring nutrient management plans prior to construction of new poultry production facilities. In addition, existing operations must also develop nutrient management plans by a specified date. Other counties are considering the development of similar ordinances.